May, 2002

Dear Investigator:

I am pleased to provide you the Philip Morris External Research Program Request for Applications booklet. This package includes information about the program, research and review process, procedures for application, the grant management process, and the application forms. Also included is the research focus that describes the research interests.

Applications must be received by August 31, 2002. We anticipate notification of awards to be made by February 28, 2003.

Research Management Group is coordinating the Philip Morris External Research Program. If you have any additional questions concerning application procedures, please contact Dr. Max Eisenberg at (410) 684-3782.

Thank you for your interest.

Sincerely,

Richard P. Solana

Richard P. Solana, D.V.M., Ph.D.
Vice President
Worldwide Scientific Affairs
Philip Morris Incorporated

Table of Contents

Philip Morris External Research Program

Research and Review Process Overview

Philip Morris agrees with the overwhelming medical and scientific consensus that cigarette smoking causes lung cancer, heart disease, emphysema and other serious diseases in smokers. Smokers are far more likely to develop serious diseases, like lung cancer, than non-smokers. There is no "safe" cigarette. These are and have been the messages of public health authorities worldwide.

The purpose of the Philip Morris External Research Program is to support the highest quality research that contributes to fundamental scientific knowledge, helps address the concerns of the public health community regarding cigarette smoking, and enables Philip Morris to continue its pursuit of product modification(s) or new product design(s) that might reduce the health risk of smoking.

A Science Advisory Board (SAB) has been assembled to assist in the formation and review of the overall research program. The SAB is a multi-disciplinary group of eminent scientists with reputations for expertise and scientific leadership in the disciplines relevant to the research program.

With SAB participation, the research focus of the program is formulated. After the research focus has been established, it is announced to the scientific community at large that research applications in response to the focus are being accepted. Letters of intent are requested to ensure that proposals are relevant to the program purpose.

The review of proposals and their selection for funding is accomplished in a scientifically rigorous and objective manner. Applications are reviewed for scientific and technical quality by the applicant's peers selected from a pool of peer reviewers. The SAB, in turn, reviews the applications and peer evaluations, and selects proposals for funding by Philip Morris. For studies of unusual complexity, cost, or duration, the Science Advisory Board may determine that additional scrutiny is warranted in the form of a team site visit as part of the review procedure. This process ensures that only high quality research is supported.

All scientific studies funded by Philip Morris must meet the highest scientific and ethical standards.

A project monitor is assigned to each funded proposal to monitor the investigator's progress toward the successful completion of the project.

When a project is completed, the investigator submits a final report and is encouraged to publish the work in an independent, peer reviewed journal for the benefit of the scientific community at large.

Request for Research Grant Applications

The Philip Morris External Research Program was established in 2000. The research program will be supplemented by selected Request for Proposals, postdoctoral fellowships, visiting scientist opportunities, and periodic conferences and workshops.

A Science Advisory Board has been assembled to assist in the formation and review of the research program. The SAB consists of eminent scientists from a range of disciplines, including epidemiology, toxicology, respiratory disease, carcinogenesis, genomics and exposure assessment.

The following research focus was built on a list of research areas identified by Philip Morris. This was accomplished at a workshop through the combined efforts of SAB members and prominent, active scientists with expertise in the various disciplines relevant to the research program. The scientists and SAB members presented and discussed their best judgments as to research needs and promising approaches in their respective fields of expertise.

Research topics of major interest to the research program are described in the focus. Individuals who intend to apply for funding are encouraged first to submit a letter of intent, two to three pages in length, indicating the research objectives, key elements of the experimental design and methods, estimated time required and approximate direct and indirect costs.

Research Focus

Introduction

In the research focus that follows, some priorities and specific requests for application are presented. While currently important research problems are suggested, the focus is by no means exhaustive. Any proposal that is consistent with the purpose of the external research program will be considered.

The research needs are presented within the scientific areas of **Exposure/Biomarkers/Dosimetry, Epidemiological Research, Clinical and Model Systems Research**, and **Tobacco Smoke and Smoking Behavior**. Due to the interdisciplinary nature of research in these areas, many projects will encompass more than one of these areas. Therefore, interdepartmental collaborations and creative, innovative joint projects are encouraged whenever they serve to strengthen the quality of the experimental design or to enhance the interpretation and evaluation of results.

Exposure/Biomarkers/Dosimetry

Exposure assessment is a necessary component in the design of reliable studies to determine health consequences of exposures. The objective of exposure assessment is to determine qualitatively and quantitatively the exposure and dose of a specific chemical or complex mixture of chemicals to a test subject or population. Accurate estimates of exposure and dose are critical factors in the conduct of all types of health research including epidemiological, clinical, and model systems research which employ a variety of test subjects (humans, animal models, tissues, cells) and dose targets (organs, tissues, cells, molecules).

Exposure estimates classically are obtained from self-reports, area and personal monitoring, and biological monitoring with biomarkers. In epidemiological studies, accurate exposure estimates reduce bias and uncertainty and, in clinical and model systems studies, improve the reliability of dose-response data. Biomarkers may be useful in assessing exposure as well as effects (i.e., providing information about the biological activities and their role from exposure of target sites to health endpoint effects).

Applications are requested for the study of:

- Measures of exposure, including methodologies, and
- Measures of biological effect, including metabolites of or adducts formed by the species of interest.
- Mechanistic information to link exposure to health outcome.

Experimental designs incorporating the use of biomarkers for the distributional analysis of exposure and effects in populations are encouraged.

Recent advances in the study of genomic and proteomic markers point to potential future successes. Research in this area includes:

- Development of assays for detection of markers of exposure, effect, and susceptibility,
- Development of valid models for dose prediction and extrapolation,
- Development of sensitive, specific biomarkers to study injury.

Epidemiological Research

Epidemiology is the scientific study of health-related events in human populations, and the application of this study to the control of health problems. Epidemiological research deals with the study of mortality – death and its causes, and the study of morbidity – illness and its causes. A goal of epidemiologic studies is to associate the risk of disease with exposure to an agent.

Methodologically, epidemiologic studies require accurate estimates of exposure and must be designed to have the power and sensitivity necessary to test the hypothesis. A number of inhalable agents such as tobacco smoke and other combustion mixtures, particulate matter, and oxidants have been implicated in the etiology or development of disease states in human populations.

Applications are requested for the epidemiological study of:

Cancer of All Sites

The relationship between exposure to complex mixtures and cancer is complex. Epidemiological research is needed to identify external and internal risk factors for the development of cancer of all sites as well as to characterize the independence or confounding potential of factors operating within complex multi-path biological systems.

Cardiovascular Diseases

Cardiovascular disease (CVD) represents the largest, single contribution to morbidity and mortality in developed countries. CVD includes but is not limited to coronary artery disease, ischemic heart disease, and stroke. Epidemiological research continues to identify external and internal risk factors among which are obesity, smok-

ing, hemodynamic flow, increased lipids, serum cholesterol, and proinflammatory processes leading to CVD with atherosclerosis as a common pathological feature.

Respiratory Diseases, Including Asthma and Chronic Obstructive Pulmonary Disease (COPD)

Results of recent epidemiological studies of outdoor exposures to complex mixtures have been consistent with chamber studies and suggest that vapor phase constituents of the mixtures may play a significant role in the development or exacerbation of respiratory symptoms as well as the coarse and fine fractions of particulate matter.

Reproductive, Maternal, and Placental Effects

Exposures to complex mixtures such as tobacco smoke have been implicated in the causation of reproductive and developmental health effects such as low birth weight. Epidemiologic studies would contribute to understanding of the impact of complex exposures on reproductive health endpoints.

Combination study designs for some or all of the above diseases/health effects as well as single endpoint studies are requested with emphasis on exposure characterization, biomarker use, and identification of potential mechanisms.

Epidemiologic studies that utilize state-of-the-art techniques would serve to enhance understanding of these diseases and health effects, in particular, genetic and genomic approaches to the identification and correlation of genetic polymorphisms in the population that relate to susceptibility and severity of outcome.

Clinical and Model Systems Research

Applications are requested for clinical and model systems on:

Cancer

While cancer can develop in a number of sites associated with inhalation of tobacco smoke and other combustion mixtures, the most common site for primary carcinogenesis is the lung. Investigations are requested to:

- Develop animal models for smoking and cancer of all sites.
- Discern mechanism(s) of cancer with respect to areas such as:
    - host susceptibility factors including genetic and immunologic susceptibility,
    - adduct formation,

- AH-receptors,
- oxidative stress,
- cell cycle regulation genes,
- molecular reactions related to cell regulation,
- cellular processes,

- Identify and study relevant smoke constituents related to mechanisms.

Cardiovascular Disease

Coronary artery disease is responsible for 44% of mortality in the United States and causes 800,000 new myocardial infarctions per year. Hypotheses have been put forward in which environmental inhalation exposures to complex mixtures, particularly the ultrafine fraction of particulate matter, can promote coronary disease. For example, inhalation of the mixture can cause airway inflammation, leading to a systemic acute phase response such as blood hypercoagulability, which then promotes a coronary event. Paradigms for the promotion of cardiac responses after inhalation of particle or vapor phase constituents could involve 1) the autonomic nervous system whereby inflammation leads to changes in heart rate variability, 2) a direct effect whereby the presence of cytokines in cardiac muscle leads to vasoconstriction, plaque rupture, or occlusion, and 3) relevant to smoking, an indirect effect whereby circulating mononuclear cells become activated by pulmonary capillary endothelium, enter plaques and contribute to events leading to their rupture.

Proposals will be considered to study:

- Development of clinical and animal models,
- Cellular, biochemical, and molecular mechanisms of atherosclerosis and other cardiovascular disease states,
- Host susceptibility factors including genetic and immunologic susceptibility,
- Relevant smoke constituents related to mechanisms of cardiovascular disease,
- Early blood and serum markers for processes contributing to cardiac events,
- Development of a repository for exposed tissue with which to conduct ongoing and future research.

Respiratory Diseases

The study of respiratory disease as a result of environmental inhalation exposures continues to be an area of importance. Included in the diseases of interest within this focus are tobacco related illnesses such as COPD (emphysema and chronic bronchitis), asthma, and pulmonary fibrosis.

A proposed basis for onset and progression of respiratory disease is the occurrence of inflammation leading to airway hyperreactivity and resultant lung injury. The components of lung injuries represent relevant topics for research on the development of respiratory disease as the result of particle/vapor/complex mixture inhalation exposures including:

- Mechanisms of airway inflammation involving cytokines and lipids,
- Mechanisms of airway hyperresponsiveness,
- Epithelial damage and end-organ dysfunction,
- Susceptibility to microorganisms,
- Identification and study of relevant smoke constituents related to mechanisms.

Complex interactions occur during the development of lung injury. In asthma, for instance, the combination of airway inflammation and airway remodeling leads to airway obstruction. Airway remodeling is a complex sequence of events involving fibroblast activation, matrix protein synthesis, muscle hyperplasia, subepithelial fibrosis, and growth factor elaboration. The severity of resultant airway obstruction varies among the affected population.

Research applications are requested to:

- Ascertain the role of genetic factors in the production of airway inflammation and airway remodeling.
- Investigate the mechanistic role of environmental inhalation exposures as triggers of lung disease.
- Investigate host susceptibility factors, including genetic and immunologic, in the etiology of lung disease due to environmental inhalation exposures.

With respect to loss of lung function as a measure of lung injury, the nonsmoking population as well as 85% of the smoking population exhibit virtually the same rate of decline of lung function with aging. An increased rate of decline of lung function is observed in

15% of the smoking population. However, if smoking is discontinued prior to apparent disability within the latter group, the rate of lung function loss returns to virtually the normal rate.

Research applications are requested to:

- Determine susceptibility factors that are responsible for accelerated loss of lung function.
- Investigate what role inflammation plays in the predisposition to accelerated lung function decline.

For the study of all facets of respiratory disease, good model systems including assays and validation are needed so that results can be extrapolated reliably to humans. Currently, an animal model for the lung conductive airways is nonexistent because humans have very different airway branching and deposition patterns from traditional laboratory animal models used to study disease.

Research applications are requested to:

- Develop animal and clinical models for lung disease, including assays and validation.

Reproductive, Maternal, and Placental Effects

Applications are requested to:

- Develop clinical and model systems for the study of reproductive, maternal, and placental effects of inhalation exposures.
- Host susceptibility factors including genetic and immunologic susceptibility.
- Investigate effects of inhalation exposures on reproductive and developmental health.
- Ascertain relevant smoke constituents related to mechanisms.

Studies that utilize state-of-the-art techniques would serve to enhance understanding of these diseases and health effects, in particular, molecular and genomic approaches to gene networks associated with normal vs. disease states in the affected tissues and analytical approaches to extracting relevant targets and principles from such data.

Tobacco Smoke and Smoking Behavior

Research applications are requested to investigate the relationship of smoking behavior to:

- The role of nicotine and/or other substances as determinants of smoke exposure.
- Host susceptibility factors including genetic susceptibility.
- Dosimetry of nicotine and other smoke constituents with respect to bioavailability and biokinetics.
- Effects of smoke constituents on sensory systems.
- Operative biochemical and molecular mechanisms involving tobacco smoke constituents.
- Brain activity measured differentially with modern imaging techniques, in order to understand neural processes occurring before, during and after smoking.
- Studies are requested to characterize pharmacologically active constituents of tobacco smoke other than (S)-nicotine and to enhance understanding of the pharmacologic impact of these constituents on effects such as dependence and cognition.

Application Process

Letter of Intent

It is requested that a two to three page letter of intent is submitted, including the research objectives, key elements of the experimental design and methods, estimated time required and approximate direct and indirect costs. These letters will be used to plan the proposal review process which may include a team site visit for projects that are unusually complex, lengthy, or costly. The letter of intent is not binding to the applicant or us. **The letter of intent should be received no later than July 15, 2002**, at the following address:

Research Management Group
1099 Winterson Road, Suite 280
Linthicum Heights, Maryland 21090-2216 USA

Letters of intent will be acknowledged in writing.

Applications

Applications must be submitted on the Application for Research Grant forms (pages F2 to F3). Investigators should review the General Information and Instructions found in this booklet.

If two applications are interdependent or closely related, they should be appropriately cross-referenced in the project plan.

Number of Copies

Two copies of the abstract and ten (original and nine) copies of the application (including abstract) are needed for the review process.

Each copy of the application, except the original, should be permanently bound (e.g. spiral, vello). The proposal cover should have a label containing the title of the proposal and the principal investigator's name.

Inquiries

Inquiries regarding application procedures may be directed to Research Management Group at the address above, by email rmgroup2000@aol.com, or calling (410) 684-3782.

Application for Research Grant

General Information and Instructions

Deadlines

Applications must be received by **August 31, 2002**. Proposals not meeting this deadline will be held for the next funding cycle. Mail the application to Research Management Group at the address above.

Notification After Review of Applications

Investigators will be notified, in writing, of the Science Advisory Board's decision on their proposal and will be provided a copy of the Science Advisory Board's summary review.

Research Abstract

A concise, descriptive summary of the project must be submitted with the application. A form is provided for this purpose (page F1).

Submission of Applications

Complete applications received by the **August 31, 2002** deadline will be reviewed. Proposals not meeting this deadline will be held for the next funding cycle. Notification of awards is anticipated by February 28, 2003.

Submit the original and nine additional copies. If photographs are included, send one original set. Each of the nine copies must be permanently bound (e.g. spiral, vello) with a label containing the project title and name of the principal investigator. Append as much material as required. Type, single space, using 8½" by 11" paper and label each sheet with the name of the principal investigator in the upper right hand corner. Number each page consecutively beginning with page 4. Do not insert pages between the Research Abstract form and Application for Research Grant form. Submit two additional copies of the Research Abstract form.

Investigators will receive written acknowledgement of receipt of the application.

Research Plan

Additional specific instructions corresponding to the line numbers on the application form are noted below.

1. *Principal Investigator*
   Name, title, telephone and fax numbers, email and mailing address of the principal investigator.

2. *Project Title*
   State the project title.

3. *Key Words*
   Provide three key words, which will be used as reference headings.

4. *Institution*
   Name and address of institution responsible and accountable for disposition of funds awarded on the basis of this application.

5. *Location*
   List location where research will be conducted, if other than institution identified in item number four.

6. *Institutional Officer*
   Name, title, telephone and fax numbers, email and mailing address of individual authorized to sign for the institution identified in item number four. It is understood that the officer, in applying for a research grant, has read and found acceptable the Management of Research Grants and Grant Administration Policy included in this booklet.

7. *Dates of Project Performance and Total Project Costs*
   List inclusive dates and total costs of this specific project related to each twelve-month period.

8. *Indirect Cost Rate*
   Note the institution's indirect cost rate charged to federal awards and include, if applicable, a copy of the indirect cost rate agreement.

9. *Budget*
   Provide sufficient detail and analysis to assure that the proposed costs are reasonable and that adequate accounting procedures will be used. Although there is no specific budget limitation on the budgets of research proposals, budgets should reflect the proposed work and be well justified.

(a) *Salaries*: List the names and positions of all applicant organization personnel involved in the project for which salaries are requested.

Note those that are considered essential to the project. Estimate the percentage of time or effort on the project for professional personnel and non-professional personnel. List the dollar amounts separately for each individual for salary and fringe benefits. Fringe benefits may be requested to the extent that they are treated consistently by the applying organization as a direct cost to all sponsors.

(b) *Consultants*: Consultant service should be explained by indicating the specific area in which such service is to be used. Identify the contemplated consultants. State the number of days of such services estimated to be required and the consultant's quoted rate per day.

(c) *Supplies and other expenses*: All supplies and other expenses should be itemized in sufficient detail to allow reviewers to understand the major categories of expenditures (e.g., animals, glassware, media chemicals, as well as publication costs, page charges, and books, listed by category and unit cost). Itemize and justify such items as patient travel and per diem costs, rentals, leases, and computer costs. Unusually expensive items for special processes should be separately identified by quantity and price and the use of application thoroughly explained in the project plan. Each individual expense item must be categorized as supplies or other expenses according to the practices of the accounting office of your institution.

(d) *Travel expenses*: Indicate the estimated number of trips required, destination, reason for travel, and cost. Identify and support any other special transportation costs attributable to the performance of this project. Foreign travel will be paid for only if approved in advance of the trip.

(e) *Alterations and renovations*: If the costs of essential alterations of facilities, including repairs, painting, removal or installation of partitions, shielding, or air conditioning, are requested, itemize them by category and justify them fully.

(f) *Indirect costs*: Exclude subcontracts and equipment from the calculation of indirect costs. In addition, the indirect cost rate may not exceed the rate already charged by the institution to its federal awards.

(g) *Subcontracts*: Itemize and enter a total for these costs. Describe and justify all appropriate costs for services purchased for, or associated with, third parties.

(h) *Equipment*: If special-purpose equipment is being proposed, provide a description of the item(s) and details of the proposed cost. If fabrication by the investigator is contemplated, include details of material, labor, and overhead.

10. *Aims*

State the objectives of the research and the hypotheses you will test.

11. *Significance of Proposed Work*

Identify gaps in the research area and discuss pertinent background material that supports the importance of the work.

12. *Preliminary Studies*

Critically evaluate existing knowledge pertinent to the application with reference to the key literature. Provide an account of the principal investigator's preliminary studies pertinent to the application and/or any other information that will help to establish the experience and competence of the investigator to pursue the proposed work.

13. *Experimental Design and Methods*

Describe experimental design and the procedures to be used to accomplish the specific aims of the project. A complete proposal includes:

- Means by which the data will be collected, analyzed, and interpreted.
- Description of the statistical methods to be used for analysis and interpretation of the data. (Describe the proposed statistical procedures with sufficient detail to allow evaluation by a statistical reviewer).
- Description of any new methodology and its advantage over existing methodologies.
- Discussion of the potential difficulties and limitations of the proposed procedures and alternative approaches to achieve the aims.
- Tentative sequence or timetable for the investigation (i.e., columnar or graphical representation of your schedule for completion of tasks).
- Identification of any procedures, situations, or materials that may be hazardous to personnel and precautions to exercise.
- List of literature you cited in your application.

14. *Available Resources and Facilities*

Describe available resources and facilities that will be utilized to complete the project.

15. *Other Support*

List all currently active and pending support for all key personnel involved in this proposal. Include the source of support, percentage of appointment, dates of project period, a brief description of the project and whether it overlaps, duplicates, replaces, or supplements this proposed work in any way.

16. *Biographical Sketch*

Provide a biographical sketch for all professionals listed in the budget. Include the following: name, title, education, scientific field, major interest and/or professional experience and publications. Limit list of publications to the 20 most important and/or relevant.

17. *Human Subjects and Laboratory Animals*

Institutional Review Board approval must be obtained for any procedures involving human subjects. The approval must be valid for the application and should be submitted with the application or within a timely manner once the principal investigator has been advised of the Science Advisory Board's funding decision.

NIH policies on the care and use of laboratory animals are endorsed and any proposed experiment involving the use of experimental animals must be approved by the Institutional Animal Care and Use Committee at the investigator's institution. Documentation of approval by the local animal care committee will be required. The approval must be valid for the application and should be submitted with the application or within a timely manner once the principal investigator has been advised of the Science Advisory Board's funding decision.

No grant award can be made without Institutional Review Board and/or Animal Care and Use Committee approval.

18. *Signature of Principal Investigator*

The application must include the principal investigator's signature to be considered complete.

Management of Research Grants

Research grants are renewable annually for the number of years initially approved, if work is progressing satisfactorily. Proposals and any addenda or modifications will be appended and made a part of the research grant.

Progress Reports

Investigators are required to submit progress reports at five and ten months of each budget year, except for the last year of the project, when the final report is substituted for the usual ten-month report. These reports are reviewed by the project monitor.

The basic objective of the five-month report is to indicate how much progress has been made in the development of experimental procedures, status of progress according to the proposed timeline, progress toward completion of objectives, and what problems, if any, have arisen. A one to two page report is usually sufficient to address these matters. The ten-month report is a combined progress report and renewal request for the next year's funding. Decisions regarding renewal of the research grant are based upon the information provided by the investigator in this report. The ten-month report should provide a detailed account of experimental results obtained during the funding period, as well as discussion of specific objectives for the coming year and a budget.

Site Visits

Project monitors usually conduct site visits to the laboratories of its funded investigators during the project period. The purpose of these visits is to evaluate the status of the project, and to provide an opportunity for an exchange of ideas and information between the investigator and project monitors.

Final Report

As part of the research project, the investigator prepares a final written report that describes the study and its findings. This provision is a major contractual responsibility of the principal investigator. It is a comprehensive account of all work accomplished toward the objectives and specific aims set out in the approved version of the investigator's proposal.

The final report should contain:

- A description of the original objectives and intentions, the rationale for the objectives, and reasons for any research redirections.
- A complete data report including tables and graphs, and descriptions of methodologies used to obtain the data.
- Interpretive results. That is, how was the data evaluated and what do they mean?
- Principal investigator's summary and conclusions.
- If applicable, brief suggestions for future specific research aims directly related to the stated objectives.
- A comprehensive list of all abstracts, oral presentations, and journal manuscripts (submitted, in press, and published) that resulted from this project. Include reprints for any published works.

The final report is a technical document subject to peer review for scientific clarity and soundness and therefore should communicate the project objectives, design, and conclusions well.

Adherence to the guidelines will facilitate a timely disbursement of withheld dollars and research grant completion.

Publications

Investigators are strongly encouraged to publish results of research in the open scientific literature. The following statement, acknowledging support, should appear in all publications resulting from work funded by the Philip Morris External Research Program:

"Research described in this article was supported (in part - *if applicable*) by Philip Morris Incorporated."

Original reprints of all journal articles, copies of abstracts, and review papers describing funded research should be submitted.

Grant Administration Policy

Research grant payments by Philip Morris will be made quarterly to the institution where the research is being conducted. A payment schedule other than quarterly must be requested and approved prior to commencement of a research grant. Payments are made upon receipt of an invoice from the institution.

Quarterly billing of 22.5% of the total budget, excluding equipment, is permitted. Ten percent of the total budget amount is withheld pending receipt of the ten-month/final report. Equipment should be invoiced in the quarter it was purchased.

Research grants may not be transferred from one institution to another due to a change in affiliation by principal investigator without written permission by Philip Morris Incorporated.

The institution may terminate a research grant prior to the normal expiration date upon written notification with a statement of reasons for termination.

Unexpended funds shall be returned either upon expiration or termination of the project.

Budgets are presumed accurate at the time of the award: however, up to 20% of the funds may be reapportioned among budget categories, except for travel, without prior approval. If, for any unforeseen reasons, additional funds or reapportionments exceeding 20% are required, such requests will be considered upon receipt of a complete statement of reasons for such change.

If funds are reapportioned into the equipment or subcontract categories, a subsequent reduction of indirect costs will result and the total project award will also be reduced.

Research Abstract

Project Title:

Investigator(s): Principal

Co-investigator(s)

Institution:

Abstract: In the space below, please provide a descriptive summary of your proposed research project.

Signature, Principal Investigator _____ Date _____

Application for Research Grant

Philip Morris External Research Program

1. Principal Investigator.

(a)_____ (b)_____
Name Title

(c)_____ (d)_____ (e)_____
Phone number Fax number email address

(f)_____ (g)_____
Institution Department

(h)_____
Mailing address

(i)_____
City, State, Country, Zip code

2. Project Title. _____

3. Key Words. _____ _____ _____

4. Institution responsible and accountable for disposition of funds awarded.

(a)_____ (b)_____
Institution Street address

(c)_____
City, State, Country, Zip code

5. Location where research will be conducted (if different than institution identified in number 4 above).

(a)_____

(b)_____

6. Institutional Officer. It is understood that the officer, in applying for a research grant, has read and found acceptable the Management of Research Grants and Grant Administration Policy.

(a) _____ (b)_____ (c)_____
Name Title Phone/fax number

(d) _____ (e)_____
email address Mailing address

(f)_____ (g)_____
Signature Date

7. Dates of project performance and total project costs. Total $_____.

Period 1 inclusive dates: _____ to _____ $_____

Period 2 inclusive dates (if required): _____ to _____ $_____

Period 3 inclusive dates (if required): _____ to _____ $_____

8. Indirect cost rate charged to federal awards _____%. If applicable, include copy of the indirect cost rate agreement.

9. Budget. Append justifications. Append as much material as required for the following areas:

(a) Salaries, Name, Title, Project, % Time to be spent on this project	$ Period 1	$ Period 2	$ Period 3
Professional:			
Technical:			
Other:			
Fringe benefits payable at institution's rate of ___%			
Subtotal (a)	$	$	$
(b) Consultants (per diem, travel, expenses)	$	$	$
(c) Supplies and other expenses:			
Consumables (by category)			
Animals and related costs			
Other expenses (identify)			
Subtotal (c)	$	$	$
(d) Travel expenses	$	$	$
(e) Alterations and renovations	$	$	$
Total direct costs	$	$	$
(f) Indirect costs	$	$	$
(g) Subcontracts	$	$	$
(h) Equipment	$	$	$
Total project costs	$	$	$

10. Aims. (hypotheses, objectives)
11. Significance of Proposed Work. (background, gaps, importance of project)
12. Preliminary Studies. (feasibility of proposed research, qualifications of investigator)
13. Experimental Plan. (design, methods, analysis of data, interpretation of results, timetable for the investigation, literature cited)
14. Available Facilities and Resources.
15. Other Support.
16. Biographical Sketch of all professional personnel listed in 9(a).
17. (a) Are human subjects to be used in this research? _____ yes _____ no
If yes, attach Institutional Review Board approval for procedures involving human subjects.
Approval date: _____ Pending: _____ *(please check, if applicable)*

(b) Are laboratory animals to be used in this research? _____yes _____ no
If yes, attach Institutional Animal Care and Use Committee approval for procedures involving animals.
Approval date: _____ Pending: _____ *(please check, if applicable)*

18. Signature of Principal Investigator. _____ Date _____

Research Management Group
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Linthicum Heights, MD 21090-2216 USA
410-684-3782 • Fax: 410-684-3729
Email: rmgroup2000@aol.com